

In step S101 the user determines whether the color displayed on the screen is the desired color. When the displayed color data meets what the user wants, the steps for calculating the gain and cutoff values are completed at step S103. However, if the displayed color data is not what the user wants, the procedure returns (S102) to the step S94 where the manual correction mode is selected by the user. Thus, steps S96 to S101 are repeated until color meeting the user's demand is obtained.

Consequently, the present invention adjusts colors displayed on a monitor using R, G and B gain and cut-off signals which change according to a color curve in a color space in order to adjust colors as a user wants, thereby improving the color function which enables the user to easily adjust colors in the state he/she wants.

It will be apparent to those skilled in the art that various modifications and variations can be made in the color curve control circuit and method of the present invention without deviating from the spirit or scope of the invention. Thus, it is intended that the present invention cover the modifications and variations of this invention provided they come within the scope of the appended claims and their equivalents.

What is claimed is:

1. A color curve control circuit comprising:
 a data input unit, for entering values to change the colors on the screen of a video monitor; 25
 a microcomputer, for processing color signals corresponding to color temperature using stored color temperature values and a color curve control program in order to change the colors on the screen according to signals received by the data input unit, and for generating digital color gain signals and digital color cutoff signals; and 30
 a digital to analog converter for converting the digital color gain signals and the digital cutoff signals from the microcomputer into analog gain signals and analog cutoff signals. 35
2. The circuit according to claim 1, further comprising:
 an on screen display unit, for generating on screen display signals describing a procedure of transmitting the display values from the data input unit to the microcomputer, and changing the colors on the screen using said display values; and 40
3. The circuit according to claim 1, wherein the data input unit comprises:
 temperature sensing means, for automatically sensing ambient temperature of the monitor, and generating a temperature signal which automatically changes a color of the screen according to the temperature of the monitor; and 50
 a keypad through which a user enters temperature values indicating a desired color to manually change the color of the screen.
4. The circuit according to claim 1, further comprising:
 a video pre-amplifier for generating amplified red, green and blue video signals by receiving red, green and blue video color signals from a computer and amplifying said red, green and blue video color signals in response to said analog gain signals; 55
 an on screen display unit, for generating red, green and blue on-screen display signals describing a procedure of transmitting the display values from the data input unit to the microcomputer, and changing the colors on the screen using said display values; 60
 a multiplexer for selectively supplying the amplified red, green and blue video signals and the red, green and blue on-screen display signals transmitted by the on screen display unit to said second amplifier.
5. A color curve control circuit comprising:
 a data input unit for entering temperature information; a microcomputer for generating digital red, green and blue video gain signals and digital red, green and blue video cutoff signals by converting the temperature information into a digital signal, and processing color signals corresponding to the temperature information using stored color temperature data and a color curve control program;
6. The color curve control circuit as set forth in claim 5, further comprising:
 an on screen display unit, for generating red, green and blue on-screen display signals describing a procedure for inputting said temperature information; and
 a multiplexer for selectively supplying the amplified red, green and blue video signals generated by said first amplifier and the red, green and blue on-screen display signals transmitted by the on screen display unit to said second amplifier.
7. The color curve control circuit as set forth in claim 5, wherein the data input unit comprises:
 a keypad for selectively controlling said microprocessor to operate in one of an automatic mode and a manual mode, said temperature information being input by a user via said keypad during said manual mode; and
 a temperature sensor for inputting said temperature information by sensing an ambient temperature of the color monitor during said automatic mode.
8. The color curve control circuit as set forth in claim 7, further comprising:
 an on screen display unit, for generating red, green and blue on-screen display signals describing a procedure for inputting said temperature information during said manual mode; and
 a multiplexer for selectively supplying the amplified red, green and blue video signals generated by said first amplifier and the red, green and blue on-screen display signals transmitted by the on screen display unit to said second amplifier.

on-screen display signals transmitted by the on screen display unit; and

a video main-amplifier for amplifying, in response to said analog cutoff signals, one of the amplified red, green and blue video signals and the red, green and blue on-screen display signals selectively supplied by said multiplexer.

5. A color curve control circuit comprising:

a data input unit for entering temperature information; a microcomputer for generating digital red, green and blue video gain signals and digital red, green and blue video cutoff signals by converting the temperature information into a digital signal, and processing color signals corresponding to the temperature information using stored color temperature data and a color curve control program;

a digital to analog converter for converting the digital red, green and blue video gain signals and the digital red, green and blue video cutoff signals from the microcomputer into analog red, green and blue video gain signals and analog red, green and blue video cutoff signals;

a first amplifier for generating amplified red, green and blue video signals by receiving red, green and blue video color signals from a computer and amplifying said red, green and blue video color signals in response to said analog red, green and blue video gain signals; and

a second amplifier for generating amplified red, green and blue video display signals, for display on a color monitor, by receiving the amplified red, green and blue video signals generated by said first amplifier and amplifying said amplified red, green and blue video signals in response to said analog red, green and blue video cutoff signals.

6. The color curve control circuit as set forth in claim 5, further comprising:

an on screen display unit, for generating red, green and blue on-screen display signals describing a procedure for inputting said temperature information; and

a multiplexer for selectively supplying the amplified red, green and blue video signals generated by said first amplifier and the red, green and blue on-screen display signals transmitted by the on screen display unit to said second amplifier.

7. The color curve control circuit as set forth in claim 5, wherein the data input unit comprises:

a keypad for selectively controlling said microprocessor to operate in one of an automatic mode and a manual mode, said temperature information being input by a user via said keypad during said manual mode; and

a temperature sensor for inputting said temperature information by sensing an ambient temperature of the color monitor during said automatic mode.

8. The color curve control circuit as set forth in claim 7, further comprising:

an on screen display unit, for generating red, green and blue on-screen display signals describing a procedure for inputting said temperature information during said manual mode; and

a multiplexer for selectively supplying the amplified red, green and blue video signals generated by said first amplifier and the red, green and blue on-screen display signals transmitted by the on screen display unit to said second amplifier.

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